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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,797	02/04/2004	Seung-Hwan Moon	YPL-0097	3347

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EXAMINER
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LAM, TUAN THIEU

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 05/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/771,797

Applicant(s)

MOON ET AL.

Examiner

Tuan T. Lam

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This is a response to the response filed 4/13/2006. Claims 1-17 are under examination.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by applicant's cited prior art figure 1.

Applicant's cited prior art figure 2 shows a shift register having a plurality of stages, each stage (figure 1) comprising a pull up part (110), a current gate line driving signal (GOUTn), a first control signal (signal at node N1), a clock signal (CKV), a pull down part (120), a second control signal (output signal of 140), a pull up driver (130) to generate the first control signal in response to a previous gate line driving signal (Goutn-1), gate line driving signal from a following stage (CT), an input voltage signal (VON), a pull down driver (140) to generate the second control signal in response to the first control signal and the input voltage signal, wherein the second control signals swings between first and second voltage levels in association with the input voltage (VON) that swings between predetermined voltage levels as called for in claims 1-7 and 12-13.

Regarding claims 8-10, applicant's cited prior art figure 1 shows a pull up transistor (110), a hold transistor (Q5).

Art Unit: 2816

Regarding claim 11, applicant's cited prior art figure 1 shows a pull down transistor (120).

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. (US2003/0090614).

Kim et al.'s figure 14 shows a shift register having a plurality of stages, each Stage (figure 15) comprising a pull up part (142), a current gate line driving signal (OUT), a first control signal (signal at node N3), a clock signal (CK), a pull down part (144), a second control signal (output signal of N4), a pull up driver (146) to generate the first control signal in response to a previous gate line driving signal (IN), gate line driving signal from a following stage (CT), an input voltage signal (VDD), a pull down driver (148) to generate the second control signal in response to the first control signal and the input voltage signal, wherein the second control signals swings between first and second voltage levels in association with the input voltage (VDD) that swings between predetermined voltage levels as called for in claims 1-7 and 12-13.

Regarding claims 8-10, figure 15 shows a pull up transistor (142), a hold transistor (NT5).

Regarding claim 11, figure 15 shows a pull down transistor (144).

#### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686

Art Unit: 2816

F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/454,331. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are having common technical features.

Regarding claim 1, claim 1 of US application 10/454,331 recites each stage comprising a pull up section, a pull down section, pull up driving, first and second pull down driving sections.

Regarding claims 2-13, the recited limitations therein are inherently present in the limitations recited in claim 1 of US application 10/454,331.

Regarding claims 14-17, claims 3 and 5 of US application 10/454,331 recites first and second pull down driving sections.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

#### ***Response to Arguments***

6. Applicant's arguments filed 4/13/2006 have been fully considered but they are not persuasive.

#### **35USC 102(e) and (b):**

Regarding the rejection of claims 1-13 as being anticipated by applicant's cited prior art

Art Unit: 2816

figure 1, applicant argues that the prior art figure 1 fails to teach “the second control signal swings between first and second voltage levels” as called for in claim 1 is not persuasive. Figure 4 of applicant’s prior art illustrates the  $V_{gs}$  of the transistor changes over time due to the its physical deterioration. The pull down driver 140 receiving first control signal (N1), Von (VDD) and Voff (ground). The second control signal (junction of Q6 and Q7) varies between Vdd and ground in response to the first control signal. Therefore, the limitation of “the second control signal swings between first and second voltage levels” is fully met.

Regarding the rejection of claims 1-13 as being anticipated by Kim et al. (US 2003/0090614), applicant argues that Kim et al. fails to teach “the second control signal swings between first and second voltage levels” as called for in claim 1 is not persuasive. Figure 15 of Kim et al. reference shows the pull down driver 148 receiving first control signal (N3), VDD and VSS. The second control signal (N4) varies between Vdd and ground in response to the first control signal. Therefore, the limitation of “the second control signal swings between first and second voltage levels” is fully met.

**Double patenting:**

Regarding the provisional double patenting rejection of claims 1-17 over claims 1-20 of co-pending application 10/454,331, applicant argues that the application 10/454/331 does not recite “the second control signal swings between first and second voltage levels” is not persuasive. Claim 1 of the co-pending application 10/454,331 recites “the first pull down driving section to output the second control signal in response to turn on of the pull up section and a second pull down driving section to turn off the pull down section in response to a front edge of an input signal and to turn on the pull down section in response of the second control signal”

Art Unit: 2816

suggests the second control signal varies between VON (Vdd) and Voff (ground). Therefore, the limitation of "the second control signal swings between first and second voltage levels" is fully met.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Lam whose telephone number is 571-272-1744. The examiner can normally be reached on Monday to Friday (7:30 am to 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY P. CALLAHAN can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2816

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tuan T. Lam  
Primary Examiner  
Art Unit 2816

5/16/2006